

## AMENDMENTS TO THE CLAIMS

**This listing of claims will replace all prior versions and listings of claims in the application:**

### LISTING OF CLAIMS:

1. (original): A method for acyltransferase reaction in which an acyl group of acyl coenzyme A (acyl CoA) is transferred characterized in that the reaction is carried out by production and/or reproduction of acyl coenzyme A from coenzyme A in a reaction system by a chemical thioester exchange reaction with an acyl group donor which is an acyl ester of a thiol compound.
2. (original): The method for acyltransferase reaction according to claim 1, wherein an acyl group donor, acyl group receptor, coenzyme A and acyltransferase are contained in the reaction system at the same time, an acyl group of the acyl group donor is transferred to coenzyme A by a chemical thioester exchange reaction to give an acyl coenzyme A and an acyl group of the acyl coenzyme A is transferred to the acyl group receptor.
3. (original): The method for acyltransferase reaction according to claim 2, wherein the method is carried out together with production and/or reproduction of acyl coenzyme A by an acyl group of the acyl group donor.
4. (original): The method for acyltransferase reaction according to claim 2, wherein the thiol compound is aromatic thiol.

5. (original): The method for acyltransferase reaction according to claim 4, wherein the aromatic thiol is thiophenol which may optionally contain a substituent group(s).
6. (original): The method for acyltransferase reaction according to claim 2, wherein the acyl group receptor is amino acid and/or a derivative thereof.
7. (original): The method for acyltransferase reaction according to claim 2, wherein the acyl group receptor is serine and/or a derivative thereof.
8. (currently amended): The method for acyltransferase reaction according to claim 1 ~~or~~ 2, wherein the acyltransferase is serine C-palmitoyl transferase.
9. (original): The method for acyltransferase reaction according to claim 8, wherein the serine C-palmitoyl transferase is derived from bacteria of genus *Sphingomonas*.
10. (currently amended): The method for acyltransferase reaction according to claim 1 ~~or~~ 2, wherein the acyltransferase is a sphingosine N-acyl transferase.
11. (original): The method for acyltransferase reaction according to claim 2, wherein the acyltransferase is a macromolecular polymerization enzyme and a macromolecular compound is synthesized in a reaction in which an acyl group donor, acyl group receptor, coenzyme A and acyltransferase are contained in the reaction system at the same time, an acyl group of the acyl group donor is transferred to coenzyme A by a chemical thioester exchange reaction to give an acyl coenzyme A and an acyl group of the acyl coenzyme A is transferred to the acyl group receptor.

12. (original): The method for acyltransferase reaction according to claim 11, wherein an acyltransferase reaction is repeated using acyl coenzyme A or a product by the acyltransferase reaction as an acyl group receptor whereby the macromolecular compound is produced.
13. (original): The method for acyltransferase reaction according to claim 11, wherein the acyl thioester is acyl ester of aromatic thiol.
14. (original): The method for acyltransferase reaction according to claim 13, wherein the acyl ester of aromatic thiol is hydroxyalkanoate thiophenyl ester.
15. (original): The method for acyltransferase reaction according to claim 14, wherein the hydroxyalkanoate thiophenyl ester is 3-hydroxyalkanoate thiophenyl ester.
16. (original): The method for acyltransferase reaction according to claim 15, wherein the 3-hydroxyalkanoate thiophenyl ester is 3-hydroxybutyrate thiophenyl ester.
17. (original): The method for acyltransferase reaction according to claim 11, wherein the macromolecular polymerization enzyme is polyhydroxy alkanoate synthase.
18. (original): The method for acyltransferase reaction according to claim 17, wherein the polyhydroxy alkanoate synthase is derived from genus *Ralstonia*.
19. (original): The method for acyltransferase reaction according to claim 18, wherein the genus *Ralstonia* is *Ralstonia eutropha*.

20. (original): The method for acyltransferase reaction according to claim 19, wherein *Ralstonia eutropha* is *Ralstonia eutropha* ATCC 17699.
21. (currently amended): A production process of a sphingoid base using the acyltransferase reaction claimed in ~~any of claims 7 to 9~~claim 7.
22. (original): The production process according to claim 21, wherein the sphingoid base is 3-ketodihydrosphingosine.
23. (original): A production process of a ceramide using the acyltransferase reaction claimed in claim 10.
24. (currently amended): In a production process of a macromolecular compound using the acyltransferase reaction claimed in ~~any of claims 11 to 20~~claim 11 above, a production process of polyester in which the macromolecular compound is polyester.
25. (original): The production process of the polyester according to claim 24, wherein the polyester is polyhydroxy alkanoate.
26. (original): The production process of the polyester according to claim 25, wherein the polyhydroxy alkanoate is poly(3-hydroxy alkanoate).
27. (original): The production process of the polyester according to claim 26, wherein the poly(3-hydroxy alkanoate) is poly(3-hydroxy butyrate).